Claims

1. An isolated essentially mammalian negative-sense single stranded RNA virus (MPV) belonging to the sub-family *Pneumovirinae* of the family *Paramyxoviridae* and identifiable as phylogenetically corresponding to the genus *Metapneumovirus*

2.An isolated negative-sense single stranded RNA virus (MPV) belonging to the sub-family *Pneumovirinae* of the family *Paramyxoviridae* and identifiable as phylogenetically corresponding to the genus *Metapneumovirus* by determining a nucleic acid sequence of said virus and testing it in phylogenetic tree analyses wherein maximum likelihood trees are generated using 100 bootstraps and 3 jumbles and finding it to be more closely phylogenetically corresponding to a virus isolate deposited as **I-2614** with CNCM, Paris than it is corresponding to a virus isolate of avian pneumovirus (APV) also known as turkey rhinotracheitis virus (TRTV), the aetiological agent of avian rhinotracheitis.

3. A virus according to claim 2 wherein said avian pneumovirus comprises APV type C (APV-C).

4. A virus according to claim 1 to 3 wherein said nucleic acid sequence comprises an open reading frame (ORF) encoding a viral protein of said virus.

5. A virus according to claim 4 wherein said open reading frame is selected from the group of ORFs encoding the N, P, M, and F proteins.

6. A virus according to claim 5 wherein said open reading frame is selected from the group of ORFs encoding the SH or G proteins.

7. A virus according to anyone of claims 1 to 6 comprising a nucleic acid or functional fragment phylogenetically corresponding to a sequence shown in figure 6.

8. A virus according to anyone of claims 1 to 7 comprising an MPV isolate deposited as I-2614 with CNCM, Institute Pasteur, Paris or a virus isolate phylogenetically corresponding therewith.

9. A virus according to claim 8 isolatable from a human with respiratory tract illness.

10. An isolated or recombinant nucleic acid or MPV-specific functional fragment thereof obtainable from a virus according to anyone of claims 1 to 9.

11. A vector comprising a nucleic acid according to claim 10.

12. A host cell comprising a nucleic acid according to claim 10 or a vector according to claim 11.

13. An isolated or recombinant proteinaceous molecule or MPV-specific functional fragment thereof encoded by a nucleic acid according to claim 10.

14. An antigen comprising a proteinaceous molecule or MPV-specific functional fragment thereof according to claim 13.

15. An antibody specifically directed against an antigen according to claim 14.

16. A method for identifying a viral isolate as an MPV comprising reacting said viral isolate or a component thereof with an antibody according to claim 15.

17. A method for identifying a viral isolate as an MPV comprising reacting said viral isolate or a component thereof with a nucleic acid according to claim 10.

18. A method according to claim 16 or 17 wherein said MPV comprises a human MPV.

19. A viral isolate identifiable with a method according to anyone of claims 16 to 18 as a mammalian negative-sense single stranded RNA virus within the sub-family *Pneumovirinae* of the family *Paramyxoviridae* and identifiable as phylogenetically corresponding to the genus *Metapneumovirus*.

20. A method for virologically diagnosing an MPV infection of a mammal comprising determining in a sample of said mammal the presence of a viral isolate or component thereof by reacting said sample with a nucleic acid according to claim 10 or an antibody according to claim 15.

21. A method for serologically diagnosing an MPV infection of a mammal comprising determining in a sample of said mammal the presence of an antibody specifically directed against an MPV or component thereof by reacting said sample with a proteinaceous molecule or fragment thereof according to claim 13 or an antigen according to claim 14.

22. A diagnostic kit for diagnosing an MPV infection comprising a virus according to anyone of claims 1 to 9, a nucleic acid according to claim 10, a proteinaceous molecule or fragment thereof according to claim 13, an antigen according to claim 14 and/or an antibody according to claim 15.

23. Use of a virus according to any one claims 1 to 9, a nucleic acid according to claim 10, a vector according to claim 11, a host cell according to claim 12, a proteinaceous molecule or fragment thereof according to claim 13, an antigen according to claim 14, or an antibody according to claim 15 for the production of a pharmaceutical composition.

24. Use according to claim 23 for the production of a pharmaceutical composition for the treatment or prevention of an MPV infection.

25. Use according to claim 23 or 24 for the production of a pharmaceutical composition for the treatment or prevention of respiratory tract illnesses.

26. A pharmaceutical composition comprising a virus according to any one claims 1 to 9, a nucleic acid according to claim 10, a vector according to claim 11, a host cell according to claim 12, a proteinaceous molecule or fragment thereof according to claim 13, an antigen according to claim 14, or an antibody according to claim 15.

27. A method for the treatment or prevention of an MPV infection comprising providing an individual with a pharmaceutical composition according to claim 26.

28. A method for the treatment or prevention of a respiratory illness comprising providing an individual with a pharmaceutical composition according to claim 26.

29. A method according to claim 27 or 28 wherein said individual comprises a human.

30. A method to obtain an antiviral agent useful in the treatment of respiratory tract illness comprising establishing a cell culture or experimental animal comprising a virus according to any one of claims 1 to 9, treating said culture or animal with an candidate antiviral agent, determining the effect of said agent on said virus or its infection of said culture or animal, and selecting an anitviral agent with the desired effect.

31. An antiviral agent obtainable according to the method of claim 30.

32. Use of an antiviral agent according to claim 31 for the preparation of a pharmaceutical composition.

33. Use according to claim 33 for the preparation of a pharmaceutical composition for the treatment of respiratory tract illness.

34. Use according to claim 32 or 33 for the preparation of a pharmaceutical composition for the treatment of an MPV infection.

35. A pharmaceutical composition comprising an antiviral agent according to claim 31.

36. A method for the treatment or prevention of an MPV infection comprising providing an individual with a pharmaceutical composition according to claim 35.

37. A method for the treatment or prevention of a respiratory illness comprising providing an individual with a pharmaceutical composition according to claim 35.

38. A method according to claim 36 or 37 wherein said individual comprises a human.

39. A method for virologically diagnosing an MPV infection of an animal comprising determining in a sample of said animal the presence of a viral isolate or component thereof by reacting said sample with a nucleic acid or an antibody specifically reactive with a component of an avian pneumovirus (APV), said nucleic acid or antibody being cross-reactive with a component MPV.

40. A method for serologically diagnosing an MPV infection of an animal comprising determining in a sample of said animal the presence of an antibody directed against an MPV or component thereof by reacting said sample with a proteinaceous molecule or fragment thereof or antigen derived from an APV isolate or component thereof, said molecule, fragment or antigen selected for being essentially homologous with a component of MPV.

41. A method for virologically diagnosing an APV infection of a bird comprising determining in a sample of said bird the presence of a viral isolate or component thereof by reacting said sample with a nucleic acid according to claim 10 or an antibody according to claim 15 said nucleic acid or antibody being cross-reactive with a component of APV.

42. A method for serologically diagnosing an APV infection of a bird comprising determining in a sample of said bird the presence of an antibody specifically directed against an APV or component thereof by reacting said sample with a proteinaceous molecule or fragment thereof according to claim 13 or an antigen according to claim 14, said molecule, fragment or antigen selected for being essentially homologous with a component of APV.

43. A method according to anyone of claims 39 to 42 wherein said APV comprises APV-C.

44. Use of a diagnostic test designed to detect APV specific antibodies for the detection of an antibody directed against MPV.

45 ' Use according to claim 44 wherein said test comprises an enzyme immune assay (EIA).

46. A method for the detection of an antibody directed against MPV in a sample comprising testing said sample in a diagnostic test designed to detect APV specific antibodies.

47. A method according to claim 46 wherein said test comprises an enzyme immune assay (EIA).